



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

**MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION**

11805 SW 26 Street, Room 208
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www.miamidade.gov/economy

SOPREMA, Inc.
310 Quadral Drive
Wadsworth, OH 44281

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: SOPREMA Alsan RS Roofing Systems over Recover Decks.

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This new NOA consists of pages 1 through 55.

The submitted documentation was reviewed by Jorge L. Acebo.



NOA No.: 15-0707.07
Expiration Date: 09/01/21
Approval Date: 09/01/16
Page 1 of 55

ROOFING SYSTEM APPROVAL

Category: Roofing
Sub-Category: Liquid Applied Roof Systems
Material: PMMA
Deck Type: Recover
Maximum Design Pressure: See Specific Deck Type

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Alsan RS 230 Field	Various	Proprietary	A two component, rapid curing, PMMA liquid membrane.
Alsan RS 260 LO Field	Various	Proprietary	Low odor, rapid curing, PMMA liquid membrane.
Alsan RS 230 Flash	Various	Proprietary	A two component, rapid curing, PMMA liquid membrane.
Alsan RS 260 LO Flash	Various	Proprietary	Low odor, rapid curing, PMMA liquid membrane.
Alsan RS Fleece	Various	Proprietary	Non-woven, needle-punched polyester fabric reinforcement used as fabric reinforcement in Alsan RS systems
Sopra-G	39" x 108' (3.5 sq.)	ASTM D4601	Fiberglass reinforced oxidized asphalt base sheet for bonding or mechanically attaching to substrate. For use as a base/ply sheet only.
Soprabase	39" x 99' (3 sq.)	ASTM D4601	Oxidized asphalt, polyester reinforced, sand-surfaced base sheet. For use as a base/ply sheet only.
Soprabase S	39" x 65' (2 sq.)	ASTM D4601	SBS modified bitumen, polyester reinforced, sand-surfaced base sheet. For use as a base/ply sheet only.
Soprabase TG	39" x 65' (2 sq.)	ASTM D4601	SBS modified bitumen, polyester reinforced, film-surfaced base sheet. For use as a base/ply sheet only.
Sopra IV	36" x 180' (5 sq.)	ASTM D2178 Type IV	Type IV, fiberglass reinforced, smooth surfaced ply sheet used in multi-ply systems and complies with ASTM and UL Standards. Applied in hot asphalt or cold adhesive.
Sopra VI	36" x 180' (5 sq.)	ASTM D2178 Type VI	Type VI, fiberglass reinforced, smooth surfaced ply sheet used in multi-ply systems and complies with ASTM and UL Standards. Applied in hot asphalt or cold adhesive.
Sopra 4897	39" x 41'	ASTM D4897	Fiberglass reinforced, smooth surfaced, modified bitumen venting base sheet for mechanically attaching to substrate.
Elastophene Sanded	39" x 49' (1.5 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripping.



NOA No.: 15-0707.07
 Expiration Date: 09/01/21
 Approval Date: 09/01/16
 Page 2 of 55

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Colphene Sanded	39" x 49' (1.5 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene Sanded 2.2	39" x 49' (1.5 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene Sanded 3.0	39" x 33' (1sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripped.
Elastophene HS	39" x 66' (2 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane with fire retardants and sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene PS	39" x 49' (1.5 sq.)	ASTM D6163	Glass reinforced modified bitumen membrane with a plastic burn-off film for heat weld bonding to the top side. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene PS 3.0	39" x 49' (1.5 sq.)	ASTM D6163	Glass reinforced modified bitumen membrane with a plastic burn-off film for heat weld bonding to the top side. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene SP 2.2	39" x 49' (1.5 sq.)	ASTM D6163	Glass reinforced modified bitumen membrane with a plastic burn-off film on the bottom and sanded on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Colphene SP 2.2	39" x 49' (1.5 sq.)	ASTM D6163	Glass reinforced modified bitumen membrane with a plastic burn-off film on the bottom and sanded on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Elastophene SP 3.0	39" x 49' (1 sq.)	ASTM D6163	Glass reinforced modified bitumen membrane with a plastic burn-off film on the bottom and sanded on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Colphene SP 3.0	39" x 49' (1 sq.)	ASTM D6163	Glass reinforced modified bitumen membrane with a plastic burn-off film on the bottom and sanded on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Elastophene HS 62	39" x 33' (1 sq.)	ASTM D6162	Woven fiberglass/polyester composite reinforced modified bitumen membrane with sanded surface on both sides. Applied in hot asphalt, cold adhesive.

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Elastophene 180 Sanded	39" x 49' (1.5 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripping.
Colphene 180 Sanded	39" x 49' (1.5 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene 180 PS	39" x 49' (1.5 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a sanded bottom and a plastic burn-off film on the top. Applied in hot asphalt, cold adhesive or ribbon stripping.
Colphene 180 PS	39" x 49' (1.5 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a sanded bottom and a plastic burn-off film on the top. Applied in hot asphalt, cold adhesive or ribbon stripping.
Sopralene 180 Sanded	39" x 33' (1 sq.) 39" x 26' (¾ sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripping.
Sopralene 250 Sanded	39" x 33' (1 sq.) 39" x 26' (¾ sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripping.
Sopralene 180 Sanded 2.2	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt or cold adhesive.
Sopralene 180 PS	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a plastic burn-off film on the top and sanded on the bottom.
Sopralene 180 PS 2.2	39" x 49' (1.5 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a sanded bottom and a plastic burn-off film on the top. Applied in hot asphalt, cold adhesive or ribbon stripping.
Sopralene 180 SP 3.5	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a plastic burn-off film on the bottom and sanded on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Colphene 180 SP 3.5	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a plastic burn-off film on the bottom and sanded on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Sopralene 180 SP 3.0	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a plastic burn-off film on the bottom and sanded on the top.

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Sopralene 250 SP	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a plastic burn-off film on the bottom and sanded on the top.
Soprafix Base 610	39" x 30' (1 sq.)	ASTM D6162	Composite reinforced modified bitumen membrane with a film surface. Applied by mechanical attachment.
Soprafix Base 611	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a film surface. Applied by mechanical attachment.
Soprafix Base 621	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a sanded surface. Applied by mechanical attachment.
Soprafix Base 630	39" x 33' (1 sq.)	ASTM D6162	Composite reinforced modified membrane with a film surface. Applied by mechanical attachment.
Soprafix [S]	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane. Applied by mechanical attachment.
Soprafix Base 612	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane. Applied by mechanical attachment.
Soprafix [F]	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane. Applied by mechanical attachment.
Soprafix Base 613	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane. Applied by mechanical attachment.
Soprafix [X]	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane. Applied by mechanical attachment.
Soprafix Base 614	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane. Applied by mechanical attachment.
Soprafix	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a 4-inch or 5-inch wide side lap with a plastic burn-off film on the bottom and sanded on the top. Applied by mechanical attachment. Lap heat welded or sealed with an approved cold adhesive.
Soprafix Base 622	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a 4-inch or 5-inch wide side lap with a plastic burn-off film on the bottom and sanded on the top. Applied by mechanical attachment. Lap heat welded or sealed with an approved cold adhesive.

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Soprafix-e	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a 5-inch wide side lap with a self-adhering compound and release film and sanded on the bottom and top surfaces. Applied by mechanical attachment. Lap self-adhered or sealed with approved cold adhesive.
Soprafix Base 641	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a 5-inch wide side lap with a self-adhering compound and release film and sanded on the bottom and top surfaces. Applied by mechanical attachment. Lap self-adhered or sealed with approved cold adhesive.
Sopralene Stick	39" x 33' (1 sq.)	ASTM D6164	Self-adhered, polyester reinforced membrane with a release film on the bottom and a sanded top.
Colphene Stick	39" x 33' (1 sq.)	ASTM D6164	Self-adhered, polyester reinforced membrane with a release film on the bottom and a sanded top.
Sopralene Flam Stick	39" x 33' (1 sq.)	ASTM D6164	Self-adhered, polyester reinforced membrane with a release film on the bottom and a plastic burn-off film on the top.
Alsan RS 222 Primer	Various	Proprietary	Two-component, rapid curing PMMA acrylic primer
Alsan RS 276 Primer	Various	Proprietary	Two-component, rapid curing PMMA acrylic primer.
Alsan RS 233 Self-Leveling Mortar	Various	Proprietary	Two-component surfacing composed of Alsan RS 223 Powder and Alsan RS 210 Low Odor Resin.
Alsan RS 263 LO Self Leveling Mortar	Various	Proprietary	Two-component surfacing composed of Alsan RS 223 Powder and Alsan RS 240 LO resin.
Alsan RS 281 Finish	Various	Proprietary	Two-component, rapid curing, PMMA acrylic clear finish resin.
Alsan RS 287 Color Finish Base	Various	Proprietary	Rapid curing, PMMA base resin.
Alsan RS 289 Textured Base	Various	Proprietary	Rapid curing, PMMA aggregated trafficable surface finish resin.
Alsan RS Deco Chips	Various	Proprietary	Polymer flat, pigmented, flakes used as a textured and decorative surfacing finish.
Elastocol 500	Various	ASTM D41	Asphalt primers.
Elastocol Stick	Various	ASTM D41	Asphalt primers.
Elastocol Stick Zero	Various	ASTM D41	Asphalt primers.

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
High Velocity [®] Insulation Adhesive III (HVIA-III)	4 dual cartridges per carton	Proprietary	Two part elastomeric urethane foam adhesive.
High Velocity [®] Insulation Adhesive III – Green	4 dual cartridges per carton	Proprietary	Two part elastomeric urethane foam adhesive.
High Velocity Insulation Adhesive PG	5 gal. or 50 gal.	Proprietary	Two part elastomeric urethane foam adhesive.
Duotack	Dual cartridges, 5 gallon, 50 gallon	Proprietary	Two part elastomeric urethane foam adhesive.
Duotack Neo	Dual cartridges, 5 gallon, 50 gallon	Proprietary	Two part polyurethane foam adhesive.
COLPLY Adhesive	5 gallon, 55 gallon, 350 gallon tote	Proprietary	Polymer modified cold process membrane adhesive.
COLPLY Modified Adhesive	5 gallon, 55 gallon, 350 gallon tote	Proprietary	Elastomeric bitumen based cold adhesive.
COLPLY EF Adhesive	5 gallon	Proprietary	Solvent free, polymeric adhesive.

APPROVED INSULATIONS:

TABLE 2		
Product Name	Product Description	Manufacturer (With Current NOA)
ACFoam-II, ACFoam-III	Polyisocyanurate foam insulation	Atlas Roofing Corporation
ISO 95+ GL	Polyisocyanurate foam insulation	Firestone Building Products Company, LLC
DensDeck, DensDeck Prime	Water resistant gypsum board	Georgia Pacific Gypsum LLC
H-Shield	Polyisocyanurate foam insulation	Hunter Panels LLC
ENRGY 3, ENRGY 3 25 PSI	Polyisocyanurate foam insulation	Johns Manville Corp.
Multi-Max FA-3, Ultra-Max	Polyisocyanurate foam insulation	RMax Operating, LLC
SECUROCK Gypsum-Fiber Roof Board	Gypsum board	USG Corp.
Sopraboard	Mineral fortified asphaltic cored coverboard	SOPREMA, Inc.
M-Shield	Polyisocyanurate foam insulation	SOPREMA, Inc.
Sopra-ISO s, Sopra-ISO+ s	Polyisocyanurate foam insulation	SOPREMA, Inc.
Sopra-ISO r	Polyisocyanurate foam insulation	SOPREMA, Inc.
Sopra-ISO x, Sopra-ISO+ x	Polyisocyanurate foam insulation	SOPREMA, Inc.
SopraRock DD, SopraRock DD Plus	Mineral wool insulation	SOPREMA, Inc.
TopRock DD, TopRock DD Plus	Mineral wool insulation	Roxul, Inc.

APPROVED FASTENERS:

TABLE 3				
Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	SOPREMA #14 Fasteners	Fasteners for membrane or insulation attachment to wood, steel or concrete decks.	Various	SOPREMA, Inc.
2.	SOPREMA #15 Fasteners	Fasteners for membrane or insulation attachment to wood, steel or concrete decks.	Various	SOPREMA, Inc.
3.	SOPREMA 3" Round Insulation Plate	Stress plate	3" diameter	SOPREMA, Inc.
4.	Soprafix 2" SB Stress Plate	Stress plate	2" diameter	SOPREMA, Inc.
5.	Soprafix MBB-R	Metal Batten Bar	Various	SOPREMA, Inc.
6.	SOPREMA #14 MP Fastener	Insulation and membrane fasteners	Various	SOPREMA, Inc.



APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
7.	SOPREMA #15 HD Fastener	Insulation and membrane fasteners	Various	SOPREMA, Inc.
8.	SOPREMA 2" Seam Plate	Stress plate	2" diameter	SOPREMA, Inc.
9.	SOPREMA 2.4" Seam Plates	Galvalume steel stress plate	2.4" diameter	SOPREMA, Inc.
10.	SOPREMA 3" Metal Insulation Plate	Stress plate	3" diameter	SOPREMA, Inc.
11.	SOPREMA Fluted Concrete Nail	Carbon steel nail with pan head and spiral shank.	Various	SOPREMA, Inc.
12.	SOPREMA Twin Loc-Nails	Base ply fastening systems for LWC, gypsum or CWF decks.	Various	SOPREMA, Inc.
13.	Dekfast 14	Insulation fastener	Various	SFS Intec, Inc.
14.	Dekfast 15 HS	Insulation fastener	Various	SFS Intec, Inc.
15.	Dekfast Galvalume Steel Hex	Galvalume AZ50 steel plate	2 7/8" x 3 1/4"	SFS Intec, Inc.
16.	Galvalume Steel 3" Round	Galvalume AZ50 steel plate	3" diameter	SFS Intec, Inc.
17.	Dekfast Coiled Batten Strip	Batten bar	Various	SFS Intec, Inc.
18.	Twin Loc-Nails	Base ply fastening systems for LWC, gypsum or CWF decks.	Various	Altenloh, Brinck & Co. U.S., Inc.
19.	Trufast #14 HD Fastener	Insulation fastener for wood, steel and concrete.	Various	Altenloh, Brinck & Co. U.S., Inc.
20.	Trufast #15 EHD Fastener	Insulation fastener for wood, steel and concrete.	Various	Altenloh, Brinck & Co. U.S., Inc.
21.	Trufast 3" Metal Insulation Plate	Galvalume AZ50 steel plate	3" diameter	Altenloh, Brinck & Co. U.S., Inc.
22.	Trufast Twin Loc-Nail Batten Fastener	Two piece assembled fastener	Various	Altenloh, Brinck & Co. U.S., Inc.
23.	Polymer Batten Strip	Modified polymer batten bar	Various	OMG, Inc.
24.	Trufast 2" Barbed Metal Seam Plate	Galvalume steel barbed plate	2" diameter	Altenloh, Brinck & Co. U.S., Inc.
25.	Trufast 2.4" Scoop Seam Plates	Galvalume steel stress plate	2.4" diameter	Altenloh, Brinck & Co. U.S., Inc.
26.	Trufast 3" Recessed Metal Insulation Plate	Galvalume AZ50 steel plate	3" diameter	Altenloh, Brinck & Co. U.S., Inc.
27.	Trufast Fluted Concrete Nail	Carbon steel nail with pan head and spiral shank.	Various	Altenloh, Brinck & Co. U.S., Inc.

APPROVED SURFACING/COATING OPTIONS:

TABLE 4

Chosen components must be applied according to manufacturer's application instructions. Any coating, listed below, used as a surfacing, must be listed within a current NOA.

System Number	Manufacturer	Application
1.	SOPREMA, Inc.	Alsan RS 281 Finish applied at a rate of 0.74 gal. per 100 ft ² for smooth surfaced or 1.23 gal./sq. for aggregated surfaces.
2.	SOPREMA, Inc.	Alsan RS 233 Self-Leveling Mortar applied at a rate of 1.8 gal. per 100 ft ² . Optional dried quartz aggregate applied at a rate of 100 lbs. per 100 ft ² into wet Alsan RS 233 Self-Leveling Mortar. Optional finish coat of Alsan RS 281 Finish applied at a rate of 0.74 gal. per 100 ft ² .
3.	SOPREMA, Inc.	Alsan RS 263 LO Self Leveling Mortar applied at a rate of 1.8 gal. per 100 ft ² . Optional dried quartz aggregate applied at a rate of 100 lbs. per 100 ft ² into wet Alsan RS 263 LO Self-Leveling Mortar. Optional finish coat of Alsan RS 281 Finish applied at a rate of 0.74 gal. per 100 ft ² .
4.	SOPREMA, Inc.	Alsan RS 230 Field applied at 2.6 gal. per 100 ft ² . Finish coat of Alsan RS 287 Color Finish Base applied at 1.2 gal. per 100 ft ² with optional Alsan RS Deco Chips applied at 1.3 lbs. per 100 ft ² embedded into wet top coat
5.	SOPREMA, Inc.	Alsan RS 233 Self-Leveling Mortar applied at 8.7 gal. per 100 ft ² . Finish coat of Alsan RS 287 Color Finish Base applied at 1.2 gal. per 100 ft ² with optional Alsan RS Deco Chips applied at 1.3 lbs. per 100 ft ² embedded into wet top coat.
6.	SOPREMA, Inc.	Alsan RS 260 LO Field applied at 2.6 gal. per 100 ft ² . Finish coat of Alsan RS 287 Color Finish Base applied at 1.2 gal. per 100 ft ² with optional Alsan RS Deco Chips applied at 1.3 lbs. per 100 ft ² embedded into wet top coat.
7.	SOPREMA, Inc.	Alsan RS 263 LO Self-Leveling Mortar applied at 8.7 gal. per 100 ft ² . Optional finish coat of Alsan RS 287 Color Finish Base applied at 1.2 gal. per 100 ft ² with optional Alsan RS Deco Chips applied at 1.3 lbs. per 100 ft ² embedded into wet top coat.
8.	SOPREMA, Inc.	Alsan RS 233 Self-Leveling Mortar applied at 8.7 gal. per 100 ft ² . Optional finish coat of Alsan RS 289 Textured Base applied at 3.2 gal. per 100 ft ² .
9.	SOPREMA, Inc.	Alsan RS 230 Field applied at 2.6 gal. per 100 ft ² . Finish coat of Alsan RS 289 Textured Base applied at 3.2 gal. per 100 ft ² . with optional Alsan RS Deco Chips applied at 1.3 lbs. per 100 ft ² embedded into wet top coat.
10.	SOPREMA, Inc.	Alsan RS 287 Color Finish Base applied at 1.2 gal. per 100 ft ² .
11.	SOPREMA, Inc.	Alsan RS 289 Textured Base applied at 3.2 gal. per 100 ft ² .

EVIDENCE SUBMITTED:

<u>Test Agency/Identifier</u>	<u>Report</u>	<u>Name</u>	<u>Date</u>
Factory Mutual Research Corp.	3002351	FM 4470	02/28/03
	3024311	FM 4470	11/01/06
	3036182	FM 4470	07/31/09
	3035625	FM 4470	09/17/10
	3042559	FM 4470	10/18/11
	3044801	FM 4470	02/27/12
	3046765	FM 4470	02/15/13
	3047439	FM 4470	07/22/13
	3046941	FM 4470	12/19/13
	3049322	FM 4470	01/17/14
	3047351	FM 4470	10/09/14
	3053841	FM 4470	03/27/15
	RR201064	FM 4470	05/01/15
	3051109	FM 4470	05/11/15
	RR202234	FM 4470	08/13/15
	RR202938	FM 4470	10/20/15
	RR203007	FM 4470	12/14/15
	3054633	FM 4470	12/18/15
	RR203157	FM 4470	01/19/16
	RR203472	FM 4470	02/05/16
	RR203157	FM 4470	01/19/2016
Underwriters Laboratories	R11436	UL 790	07/29/16
Trinity ERD	2109.08.02	TAS 114	08/06/02
	2766.12.03	TAS 114	12/01/03
	2779.11.05-R1	TAS 114	04/18/07
	S11440.11.10-4	ASTM D2178	11/17/10
	S39320.01.12-R1	TAS 114	05/24/12
	S39970.07.12-2	ASTM D6164	07/12/12
	S35860.05.12-1-R2	ASTM D6163	02/14/13
	S35860.05.12-3-R1	ASTM D6164	03/14/13
	S45010.02.14	ASTM D6506	02/07/14
	S47170.05.14-1	TAS 114	05/12/14
	S32700.12.10-R2	ASTM D6162	07/07/14
	S11440.11.10-3-R2	ASTM D4601/TAS 117(B)	08/26/14
	S43400.08.14-6	ASTM D6164	08/26/14
	S35860.05.12-2-R3	ASTM D6164	08/28/14
	S44110.09.14-7C	ASTM D6164	09/02/14
	S44110.09.14-1	ASTM D6162	09/08/14
	S44110.09.14-7A	ASTM D4601	09/08/14
	S43400.08.14-4-R1	ASTM D6163	10/24/14
	S43210.11.14	ASTM D1876	11/10/14
	S32840.06.10-R1	TAS 117 (B)	12/11/14
	S47160.01.14-R1	TAS 114 (H)	12/11/14
	M45560.10.13-1-R2	ASTM D4897/TAS 117(B)	12/11/14
	S35860.12.11-1-R1	ASTM D2178	12/12/14
	S35860.09.12-R2	ASTM D6163	12/12/14

EVIDENCE SUBMITTED:

<u>Test Agency/Identifier</u>	<u>Report</u>	<u>Name</u>	<u>Date</u>
Trinity ERD	S39970.07.12-R1	ASTM D6162	12/12/14
	S44110.01.15-4A-R3	ASTM D6164	05/01/15
	SOPC-S42600.08.15-R2	Physical Properties	03/21/16
	S41370.07.12-R1	FM 4474 & TAS 114	04/27/16
PRI Construction Materials Technologies, LLC	SOP-010-02-01.03	TAS-138	07/26/11
	SOP-042-02-01	ASTM D4601	02/27/12
	SOP-041-02-01	ASTM D2178	02/27/12
	SOP-040-02-01	ASTM D2178	02/27/12
	SOP-049-02-01	ASTM D1644/ASTM D2196	05/31/12
	SOP-050-02-01	ASTM D3019	07/12/12
	SOP-056-02-01	Various	09/12/12
	SOP-071-02-01	Physical Properties	02/12/16

DECK STRESS ANALYSIS CALCULATIONS/REPORTS

<u>Engineer/Agency</u>	<u>Identifier</u>	<u>Assemblies</u>	<u>Date</u>
Robert Nieminen, P.E.	Signed/Sealed Calculations	C(1), C(2), D(12), E(1), E(3),	04/29/16
FM Approval Deck Limitations	N/A	D(1), D(2), D(3), D(4), D(5), D(6), D(7), D(8), D(9), D(10), D(11), D(13)	01/01/13



APPROVED ASSEMBLIES:

Membrane Type: Liquid Applied Membrane

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type A(1): One or more layers of insulation adhered with approved adhesive.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ACFoam-II, ACFoam-III, Sopra-ISO s, Sopra-ISO+ s, ENRGY 3, H-Shield, M-Shield, Sopra-ISO r (flat or tapered) Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
Sopraboard Minimum 1/8" thick	N/A	N/A

Note: All insulation shall be adhered with High Velocity® Insulation Adhesive III (HVIA-III), High Velocity® Insulation Adhesive III –Green, High Velocity® Insulation Adhesive PG, Duotack, Duotack Neo, Millennium One Step Foamable Adhesive, Millennium One Step Green Foamable Adhesive or Millennium PG-1 Low Viscosity Insulation Adhesive applied in continuous ¾" to 1" wide ribbons at a maximum spacing of 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: One or more plies of Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied.
Or
One or more plies of Elastophene Sanded, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene HS 62, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Sopralene 180 Sanded, Sopralene 250 Sanded or one or more plies of Type IV or Type VI ply sheets, adhered in COLPLY EF Adhesive at a rate of 1.5 gal./sq.

**Primer:
(Optional)** Alsan RS 222 Primer applied at a rate of 1 gal./sq.

Base Coat: Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.

Reinforcement: Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.

Top Coat: Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.

**Surfacing:
(Optional)** Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.

**Maximum Design
Pressure:** -105 psf. (See General Limitation #9.)

Membrane Type: Liquid Applied Membrane
Deck Type 7I: Recover, Insulated
Deck Description: Concrete
System Type A(2): One or more layers of insulation adhered with approved adhesive to existing Granule Surface Modified Bitumen or BUR.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
H-Shield, M-Shield, Sopra-ISO r, AC Foam-II, Sopra-ISO s, ISO 95+ GL, Multi-Max FA-3, Sopra-ISO x, ENRGY 3 Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in Duotack or Duotack Neo in 1/2" wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate.

Base Sheet: One or more plies of Elastophene Sanded, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene HS 62, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Sopralene 180 Sanded, Sopralene 250 Sanded adhered in hot asphalt at 25 lbs./sq. or in COLPLY EF Adhesive at a rate of 1.5 gal./sq.
Or
Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP torch-applied.

Primer: Alsan RS 222 Primer applied at a rate of 1 gal./sq.
(Optional)

Base Coat: Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.

Reinforcement: Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.

Top Coat: Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.

Surfacing: Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
(Optional)

Maximum Design Pressure: -195 psf. (See General Limitation #9.)



Membrane Type: Liquid Applied Membrane

Deck Type 7I: Recover, Insulated

Deck Description: Structural Concrete

System Type B(1): Base layer of insulation mechanically fastened, optional top layer adhered with approved adhesive.

All General and System Limitations apply.

Thermal Barrier: Min. ¼” thick DensDeck or DensDeck Prime, loose-laid.
(Optional)

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
H-Shield, M-Shield, Sopra-ISO r, ACFoam-II, Sopra-ISO s (flat or tapered)		
Minimum 2.0” thick	6, 11, 19, 27	1:1.6 ft²

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK Gypsum-Fiber Roof Board, DensDeck Prime		
Minimum ¼” thick	N/A	N/A

Note: Top layer of insulation shall be adhered with Duotack or Duotack Neo applied in ½” to ¾” wide ribbons spaced 12” o.c. Refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as the base layer shall only be used as the base layer with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet: One or more layers of Soprabase, Elastophene Sanded, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene HS 62, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded or Sopralene 250 Sanded adhered in hot asphalt at 25 lbs./sq. or applied in COLPLY EF Adhesive applied at a rate of 1.5 – 2 gal./sq.

Or

One layer of Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, torch-applied.

Or

One layer of Elastophene Stick, Sopralene Stick, Colphene Stick, self-adhered to substrate primed with Elastocol Stick or Elastocol Stick Zero.

Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1-1.5 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	-82.5 psf. (See General Limitation #7)

Membrane Type:	Liquid Applied Membrane
Deck Type 7I:	Recover, Insulated
Deck Description:	Structural Concrete
System Type B(2):	Base layer of insulation mechanically fastened, optional top layer adhered with approved adhesive.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum ½” thick	6, 11, 19, 27	1:2 ft²

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Primer:	Elastocol 500, Elastocol Stick Zero or Elastocol Stick at a rate of 0.5 gal./sq.
(Optional)	
Vapor Barrier:	Sopravap'r, Elastophene Stick, Sopralene Stick or Colphene Stick, self-adhered over primed gypsum board.
	Or
	Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied over primed gypsum board.
	Or
	Elastophene Sanded, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 250 Sanded, Elastophene PS, Elastophene PS 3.0, Elastophene 180 PS, Colphene 180 PS, Sopralene 180 PS, Sopralene 180 PS 2.2, adhered in hot asphalt at 25 lbs./sq. or applied in COLPLY Adhesive, COLPLY Modified Adhesive at a rate of 1.5 gal./sq.

Middle Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
H-Shield, H-Shield CG, M-Shield, Sopra-ISO r, Sopra-ISO+ r, ACFoam-II, ACFoam-III, Sopra-ISO s, Sopra-ISO+ s, Multi-Max FA-3, UltraMax, Sopra-ISO x, Sopra-ISO+ x, ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, EnergyGuard POLYISO Insulation		
Minimum 1.5” thick (flat or tapered)	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK Gypsum-Fiber Roof Board		
Minimum ¼” thick	N/A	N/A



Note: Top layer of insulation shall be adhered with Duotack or Duotack Neo applied in ½” to ¾” wide ribbons spaced 12” o.c. Refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as the base layer shall only be used as the base layer with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet:	One or more layers of Soprabase, Elastophene Sanded, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene HS 62, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded or Sopralene 250 Sanded adhered in hot asphalt at 25 lbs./sq. or applied in COLPLY EF Adhesive applied at a rate of 1.5 – 2 gal./sq. Or One layer of Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, torch-applied. Or One layer of Elastophene Stick, Sopralene Stick, Colphene Stick, self-adhered to substrate primed with Elastocol Stick or Elastocol Stick Zero.
Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1-1.5 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	-82.5 psf. (See General Limitation #7)

Membrane Type: Liquid Applied Membrane

Deck Type 7I: Recover, Insulated

Deck Description: Structural concrete or 18-22 ga., Grade 33 steel deck with supports spaced maximum 6 ft. o.c. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 270 lbf when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type C(1): All layers of insulation simultaneously attached.

All General and System Limitations apply.

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ACFoam-II, Sopra-ISO s, ISO 95+ GL, M-Shield, Sopra-ISO r, Multi-Max FA-3, Sopra-ISO x		
Minimum 1" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
Sopraboard		
Minimum 1/8" thick	6, 7, 11, 19, 20	1:2 ft ²

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Primer: Elastocol 500, Elastocol Stick, Elastocol Stick Zero applied at a rate of 1 gal./sq.,
(Optional) to top surface of any insulation, base or ply sheet prior to application of next layer.

Base Sheet: One or more plies of Elastophene Sanded, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded, Sopralene 180 Sanded 2.2 or Sopralene 250 Sanded adhered in hot asphalt at 25 lbs./sq. or in COLPLY EF Adhesive at a rate of 1.5 gal./sq.

Or

Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied.

Ply Sheet: One or more plies of Elastophene Sanded, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded, Sopralene 180 Sanded 2.2 or Sopralene 250 Sanded adhered in hot asphalt at 25 lbs./sq. or in COLPLY EF Adhesive at a rate of 1.5 gal./sq.

Or

Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied.



Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	-67.5 psf. (See General Limitation #7.)

Membrane: Liquid Applied Membrane

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 80 steel deck fastened to structural supports spaced a maximum 6 ft. o.c. * The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 360 lbf when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type C(2): All layers of insulation simultaneously attached

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer:	Insulation Fasteners (Table 3)	Fastener Density/ft²
H-Shield, M-Shield, Sopra-ISO r Minimum 1.5" thick	N/A	N/A
Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density.		
Top Insulation Layer:	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	6, 19	1:1 ft ²

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: Two or three plies of Sopra IV, Sopra VI or two plies of Elastophene HS 62, Elastophene Sanded 3.0, Elastophene HS, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Colphene 180 Sanded, Sopralene 180 Sanded, Sopralene 250 Sanded, applied in hot asphalt at a rate of 20-40 lbs./sq.

Or

Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied.

Or

One layer of Sopralene Stick or Colphene Stick, self-adhered.

Primer: Alsan RS 222 Primer applied at a rate of 1 gal./sq.

(Optional)

Base Coat: Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.

Reinforcement: Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.

Top Coat: Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.

**Surfacing:
(Optional)** Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.

**Maximum Design
Pressure:** -180 psf. (See General Limitation #7)

Membrane: Liquid Applied Membrane

Deck Type 7I: Recover, Insulated

Deck Description: 18-22 ga., A1008 SS Grade 33, Type B steel deck fastened to ¼” thick steel structural supports spaced a maximum of 6’ o.c. with Traxx/5 fasteners and ¾” diameter steel washers spaced a maximum 6” o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 24 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(1): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Ultra-Max, Sopra-ISO+ x, H-Shield, M-Shield, Sopra-ISO r, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus Minimum 1.5” thick	N/A	N/A
Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
Sopraboard Minimum ⅛” thick	N/A	N/A
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ¼” thick	N/A	N/A

Note: Top layer shall have preliminary attachment, prior to the installation of the base sheet. Insulation shall be limited to maximum 1” thickness. All layers of insulation and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density.

Base Sheet: One layer of Soprafix Base 610*, Soprafix Base 611*, Soprafix Base 612*, Soprafix Base 613*, Soprafix Base 614*, Soprafix Base 622, Soprafix Base 630*, Soprafix, Soprafix [S]*, Soprafix [F]*, Soprafix [X]* fastened to the deck as described below:
*Requires torch-applied ply sheet.

Fastening #1: Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2” Barbed Metal Seam Plates or SOPREMA #15 HD Fasteners with SOPREMA 2” Seam Plates with row spacing at a maximum 35.5” o.c. The fasteners are spaced 12” o.c. in a 4” wide torch-applied base sheet side laps.
(Meets Maximum Design Pressure of –67.5 psf. See General Limitation #7.)

Fastening #2: Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2.4” Scoop Seam Plates or SOPREMA #15 HD Fasteners with SOPREMA 2.4” Seam Plates with row spacing at a maximum 35.5” o.c. The fasteners are spaced 12” o.c. in a 4” wide torch-applied base sheet side laps.
(Meets Maximum Design Pressure of –75 psf. See General Limitation #7.)

**Ply Sheet:
(Optional)** One or more plies of Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP, torch-applied.

Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1-1.5 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	See Fastening Requirements above.

Membrane: Liquid Applied Membrane

Deck Type 7I: Recover, Insulated

Deck Description: Structural Concrete or Min. 18-22 ga., A1008 SS Grade 33, Type B steel deck fastened to ¼” thick steel structural supports spaced a maximum of 6’ o.c. with Traxx/5 fasteners and ¾” diameter steel washers spaced a maximum 6” o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 24 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(2): Membrane fastened over insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer (LWC)	Insulation Fasteners (Table 3)	Fastener Density/ft²
Celcore MF Cellular Concrete, Siplast Lightweight Insulating Concrete, Elastizell Lightweight Insulating Concrete, Concrecel Lightweight Insulating Concrete or Mearlcrete Lightweight Insulating Concrete		
Minimum 2.0” thick, Minimum 300 psi.	N/A	N/A

Note: Load capacity of the structural substrate must be verified for the additional load of the LWC. The LWC must be properly vented.

Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Ultra-Max, Sopra-ISO+ x, H-Shield, M-Shield, Sopra-ISO r, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus		
Minimum 1.5” thick	N/A	N/A

Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
Sopraboard		
Minimum 1/8” thick	N/A	N/A
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum 1/4” thick	N/A	N/A

Note: Top layer (other than LWC) shall have preliminary attachment, prior to the installation of the base sheet. Additional Insulation (other than LWC) shall be limited to maximum 1” total thickness and shall be applied over a barrier sheet to separate from the LWC. All layers of insulation and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One layer of Soprafix Base 610*, Soprafix Base 611*, Soprafix Base 612*, Soprafix Base 613*, Soprafix Base 614*, Soprafix Base 622, Soprafix Base 630*, Soprafix, Soprafix [S]*, Soprafix [F]*, Soprafix [X]* fastened to the deck as described below:
*Requires torch-applied ply sheet.

Fastening #1:	Attach base sheet using Trufast #15 EHD Fasteners, Trufast #14 HD Fastener or Trufast Fluted Concrete Nail with Trufast 2" Barbed Metal Seam Plates or SOPREMA #15 HD Fasteners, SOPREMA #14 MP Fastener or SOPREMA Fluted Concrete Nail with SOPREMA 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. in a 4" wide torch-applied base sheet side laps. <i>(Meets Maximum Design Pressure of -67.5 psf. See General Limitation #7.)</i>
Fastening #2:	Attach base sheet using Trufast #15 EHD Fasteners, Trufast #14 HD Fastener or Trufast Fluted Concrete Nail with Trufast 2.4" Scoop Seam Plates or SOPREMA #15 HD Fasteners, SOPREMA #14 MP Fastener or SOPREMA Fluted Concrete Nail with SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. in a 4" wide torch-applied base sheet side laps. <i>(Meets Maximum Design Pressure of -75 psf. See General Limitation #7.)</i>
Ply Sheet: (Optional)	One or more plies of Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP torch-applied.
Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1-1.5 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	See Fastening Requirements above.

Membrane: Liquid Applied Membrane

Deck Type 7I: Recover, Insulated

Deck Description: Structural Concrete or Min. 18-22 ga., A1008 SS Grade 33, Type B steel deck fastened to ¼” thick steel structural supports spaced a maximum of 6’ o.c. with Traxx/5 fasteners and ¾” diameter steel washers spaced a maximum 6” o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 24 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(3): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer (LWC)	Insulation Fasteners (Table 3)	Fastener Density/ft²
Celcore MF Cellular Concrete, Siplast Lightweight Insulating Concrete, Elastizell Lightweight Insulating Concrete, Concrecel Lightweight Insulating Concrete or Mearlcrete Lightweight Insulating Concrete		
Minimum 2.0” thick, Minimum 300 psi.	N/A	N/A

Note: Load capacity of the structural substrate must be verified for the additional load of the LWC. The LWC must be properly vented.

Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Multi-Max FA-3, Ultra-Max, Sopra-ISO x, Sopra-ISO+ x, H-Shield, M-Shield, Sopra-ISO r, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus		
Minimum 1.5” thick	N/A	N/A

Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
Sopraboard		
Minimum 1/8” thick	N/A	N/A
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum 1/4” thick	N/A	N/A

Note: Top layer (other than LWC) shall have preliminary attachment, prior to the installation of the base sheet. Additional Insulation (other than LWC) shall be limited to maximum 1” total thickness and shall be applied over a barrier sheet to separate from the LWC. All layers of insulation and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One layer of Soprafix Base 621, Soprafix Base 622, Soprafix, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 Sanded or Sopralene 250 SP fastened to the deck as described below:

Fastening #1:	Attach base sheet using Trufast #15 EHD Fasteners, Trufast #14 HD Fastener or Trufast Fluted Concrete Nail with Trufast 2" Barbed Metal Seam Plates or SOPREMA #15 HD Fasteners, SOPREMA #14 MP Fastener or SOPREMA Fluted Concrete Nail with SOPREMA 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide, torch-applied base sheet side laps. <i>(Meets Maximum Design Pressure of -67.5 psf. See General Limitation #7.)</i>
Fastening #2:	Attach base sheet using Trufast #15 EHD Fasteners, Trufast #14 HD Fastener or Trufast Fluted Concrete Nail with Trufast 2.4" Scoop Seam Plates or SOPREMA #15 HD Fasteners, SOPREMA #14 MP Fastener or SOPREMA Fluted Concrete Nail with SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide, torch-applied base sheet side laps. <i>(Meets Maximum Design Pressure of -75 psf. See General Limitation #7.)</i>
Ply Sheet: (Optional)	One or more plies of Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP torch-applied.
Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1-1.5 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	See Fastening Requirements above.

Membrane: Liquid Applied Membrane

Deck Type 7I: Recover, Insulated

Deck Description: 18-22 ga. (See fastening options for steel gage), Type B, Grade 33 steel deck fastened to ¼” thick steel structural supports spaced a maximum of 62”- 72” o.c. (See fastening options support span) with Traxx/5 fasteners and ¾” diameter steel washers spaced a maximum 6” o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 24 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(4): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Ultra-Max, Sopra-ISO+ x, H-Shield, M-Shield, Sopra-ISO r, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus Minimum 1.5” thick	N/A	N/A
Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
Sopraboard Minimum 1/8” thick	N/A	N/A
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum 1/4” thick	N/A	N/A

Note: Top layer shall have preliminary attachment, prior to the installation of the base sheet. Insulation shall be limited to maximum 1” thickness. All layers of insulation and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One layer of Soprafix Base 621, Soprafix, Soprafix Base 622, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 Sanded or Sopralene 250 SP fastened to the deck as described below:

Fastening #1: *(Min. 18-22 ga. Steel in max. 72” support span)*
Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2” Barbed Metal Seam Plates or SOPREMA #15 HD Fasteners with SOPREMA 2” Seam Plates with row spacing at a maximum 35.5” o.c. The fasteners are spaced 12” o.c. and centered inside the 4” wide, torch-applied base sheet side laps.
(Meets Maximum Design Pressure of -67.5 psf. See General Limitation #7.)

- Fastening #2:** *(Min. 18-22 ga. Steel in max. 72" support span)*
Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2.4" Scoop Seam Plates or SOPREMA #15 HD Fasteners with SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide, torch-applied base sheet side laps.
(Meets Maximum Design Pressure of -75 psf. See General Limitation #7.)
- Fastening #3:** *(Min. 18 ga. Steel in max. 72" support span; Min. 20 ga. Steel in max. 69" support span; Min. 22 ga. steel in max. 62" support span.)*
Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates or Trufast 2.4" Scoop Seam Plates or SOPREMA #15 HD Fasteners with SOPREMA 2" Seam Plates or SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. and centered inside the 4" wide torch-applied base sheet side laps.
(Meets Maximum Design Pressure of -112.5 psf. See General Limitation #7.)
- Primer:**
(Optional) Alsan RS 222 Primer applied at a rate of 1-1.5 gal./sq.
- Base Coat:** Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
- Reinforcement:** Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
- Top Coat:** Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
- Surfacing:**
(Optional) Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
- Maximum Design Pressure:** See Fastening Requirements above.

Membrane: Liquid Applied Membrane

Deck Type 7I: Recover, Insulated

Deck Description: 18-22 ga., Type B, Grade 80 steel deck fastened to 1/4" thick steel structural supports spaced a maximum of 6' o.c. with Traxx/5 fasteners and 3/4" diameter steel washers spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 12 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(5): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Ultra-Max, Sopra-ISO+ x, H-Shield, M-Shield, Sopra-ISO r Minimum 1.5" thick	N/A	N/A
Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
Sopraboard Minimum 1/8" thick	N/A	N/A
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	N/A	N/A

Note: Top layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One layer of Soprafix Base 621, Soprafix, Soprafix Base 622, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 Sanded or Sopralene 250 SP fastened to the deck as described below:

Fastening #1: Attach base sheet using Trufast #14 HD Fasteners with Trufast 2" Barbed Metal Seam Plates or SOPREMA #14 MP Fasteners with SOPREMA 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps.
(Meets Maximum Design Pressure of -67.5 psf. See General Limitation #7.)

Fastening #2: Attach base sheet using Trufast #14 HD Fasteners with Trufast 2.4" Scoop Seam Plates or SOPREMA #14 MP Fasteners with SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps.
(Meets Maximum Design Pressure of -75 psf. See General Limitation #7.)

Fastening #3	Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2.4" Scoop Seam Plates or SOPREMA #15 HD Fasteners with SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps. <i>(Meets Maximum Design Pressure of -97.5 psf. See General Limitation #7.)</i>
Fastening #4:	Attach base sheet using Trufast #14 HD or Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates or Trufast 2.4" Scoop Seam Plates or SOPREMA #14 MP or SOPREMA #15 HD Fasteners with SOPREMA 2" Seam Plates or SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. and centered inside the 4" wide torch-applied base sheet side laps. <i>(Meets Maximum Design Pressure of -120 psf. See General Limitation #7.)</i>
Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1-1.5 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	See Fastening Requirements above.

Membrane: Liquid Applied Membrane

Deck Type 7I: Recover, Insulated

Deck Description: Structural concrete or min. 18-22 ga., Type B, Grade 80 steel deck fastened to ¼” thick steel structural supports spaced a maximum of 6’ o.c. with Traxx/5 fasteners and ¾” diameter steel washers spaced a maximum 6” o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 12 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(6): Membrane fastened over insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer (LWC)	Insulation Fasteners (Table 3)	Fastener Density/ft²
Celcore MF Cellular Concrete, Siplast Lightweight Insulating Concrete, Elastizell Lightweight Insulating Concrete, Concrecel Lightweight Insulating Concrete or Mearlcrete Lightweight Insulating Concrete		
Minimum 2.0” thick, Minimum 300 psi.	N/A	N/A

Note: Load capacity of the structural substrate must be verified for the additional load of the LWC. The LWC must be properly vented.

Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Multi-Max FA-3, Ultra-Max, Sopra-ISO x, Sopra-ISO+ x, H-Shield, M-Shield, Sopra-ISO r, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus		
Minimum 1.5” thick	N/A	N/A

Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
Sopraboard		
Minimum 1/8” thick	N/A	N/A
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum 1/4” thick	N/A	N/A

Note: Top layer (other than LWC) shall have preliminary attachment, prior to the installation of the base sheet. Additional Insulation (other than LWC) shall be limited to maximum 1” total thickness and shall be applied over a barrier sheet to separate from the LWC. All layers of insulation and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One layer of Soprafix Base 621, Soprafix Base 622, Soprafix, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 Sanded or Sopralene 250 SP fastened to the deck as described below:

- Fastening #1:** Attach base sheet using Trufast #14 HD Fasteners with Trufast 2" Barbed Metal Seam Plates or SOPREMA #14 MP Fasteners with SOPREMA 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps.
(Meets Maximum Design Pressure of -67.5 psf. See General Limitation #7.)
- Fastening #2:** Attach base sheet using Trufast #14 HD Fasteners with Trufast 2.4" Scoop Seam Plates or SOPREMA #14 MP Fasteners with SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps.
(Meets Maximum Design Pressure of -75 psf. See General Limitation #7.)
- Fastening #3:** Attach base sheet using Trufast #15 EHD Fasteners, Trufast #14 HD Fastener or Trufast Fluted Concrete Nail with Trufast 2.4" Scoop Seam Plates or SOPREMA #15 HD Fasteners, SOPREMA #14 MP Fastener or SOPREMA Fluted Concrete Nail with SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps.
(Meets Maximum Design Pressure of -97.5 psf. See General Limitation #7.)
- Fastening #4:** Attach base sheet using Trufast #15 EHD Fasteners, Trufast #14 HD Fastener or Trufast Fluted Concrete Nail with Trufast 2" Barbed Metal Seam Plates or Trufast 2.4" Scoop Seam Plates or SOPREMA #15 HD Fasteners, SOPREMA #14 MP Fastener or SOPREMA Fluted Concrete Nail with SOPREMA 2" Seam Plates or SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. and centered inside the 4" wide torch-applied base sheet side laps.
(Meets Maximum Design Pressure of -120 psf. See General Limitation #7.)
- Primer:
(Optional)** Alsan RS 222 Primer applied at a rate of 1-1.5 gal./sq.
- Base Coat:** Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
- Reinforcement:** Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
- Top Coat:** Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
- Surfacing:
(Optional)** Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
- Maximum Design Pressure:** See Fastening Requirements above.

Membrane: Liquid Applied Membrane

Deck Type 7I: Recover, Insulated

Deck Description: Structural concrete or 18-22 ga., Grade 80, Type B steel deck fastened to 1/4" thick steel structural supports spaced a maximum of 6' o.c. with Traxx/5 fasteners and 3/4" diameter steel washers spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 12 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(7): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Ultra-Max, Sopra-ISO+ x, H-Shield, M-Shield, Sopra-ISO r, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus	N/A	N/A
Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
Sopraboard		
Minimum 0.125" thick	N/A	N/A
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum 0.25" thick	N/A	N/A

Note: Top layer shall have preliminary attachment, prior to the installation of the base sheet. Insulation shall be limited to maximum 1" thickness. All layers of insulation and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One layer of Soprafix Base 610*, Soprafix Base 611*, Soprafix Base 612*, Soprafix Base 613*, Soprafix Base 614*, Soprafix Base 622, Soprafix Base 630*, Soprafix, Soprafix [S]*, Soprafix [F]* or Soprafix [X]* fastened to the deck as described below:

Fastening #1: Attach base sheet using Trufast #14 HD Fasteners with Trufast 2" Barbed Metal Seam Plates or SOPREMA #14 MP Fasteners with SOPREMA 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps.
(Meets Maximum Design Pressure of -67.5 psf. See General Limitation #7.)

Fastening #2: Attach base sheet using Trufast #14 HD Fasteners with Trufast 2.4" Scoop Seam Plates or SOPREMA #14 MP Fasteners with SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps.
(Meets Maximum Design Pressure of -75 psf. See General Limitation #7.)

Fastening #3:	<p>Attach base sheet using Trufast #15 EHD Fasteners, Trufast #14 HD Fastener or Trufast Fluted Concrete Nail with Trufast 2" Barbed Metal Seam Plates or SOPREMA #15 HD Fasteners, SOPREMA #14 MP Fastener or SOPREMA Fluted Concrete Nail with SOPREMA 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. in a 4" wide torch-applied base sheet side laps.</p> <p><i>(Meets Maximum Design Pressure of -120 psf. See General Limitation #7.)</i></p>
Fastening #4:	<p>Attach base sheet using Trufast #15 EHD Fasteners, Trufast #14 HD Fastener or Trufast Fluted Concrete Nail with Trufast 2.4" Scoop Seam Plates or SOPREMA #15 HD Fasteners, SOPREMA #14 MP Fastener or SOPREMA Fluted Concrete Nail with SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. in a 4" wide torch-applied base sheet side laps.</p> <p><i>(Meets Maximum Design Pressure of -135 psf. See General Limitation #7.)</i></p>
Ply Sheet: (Optional)	One or more plies of Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP torch-applied.
Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1-1.5 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	See Fastening Requirements above.

Membrane: Liquid Applied Membrane

Deck Type 7I: Recover, Insulated

Deck Description: Structural concrete or Min. 22 ga., Grade 80, Type B steel deck fastened to ¼” thick steel structural supports spaced a maximum of 6’ o.c. with Traxx/5 fasteners and ¾” diameter steel washers spaced a maximum 6” o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 12 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(8): Membrane fastened over insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer (LWC)	Insulation Fasteners (Table 3)	Fastener Density/ft²
Celcore MF Cellular Concrete, Siplast Lightweight Insulating Concrete, Elastizell Lightweight Insulating Concrete, Concrecel Lightweight Insulating Concrete or Mearlcrete Lightweight Insulating Concrete		
Minimum 2.0” thick, Minimum 300 psi.	N/A	N/A

Note: Load capacity of the structural substrate must be verified for the additional load of the LWC. The LWC must be properly vented.

Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Multi-Max FA-3, Ultra-Max, Sopra-ISO x, Sopra-ISO+ x, H-Shield, M-Shield, Sopra-ISO r, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus		
Minimum 1.5” thick	N/A	N/A

Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
Sopraboard		
Minimum 0.125” thick	N/A	N/A
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum 0.25” thick	N/A	N/A

Note: Top layer (other than LWC) shall have preliminary attachment, prior to the installation of the base sheet. Additional Insulation (other than LWC) shall be limited to maximum 1” total thickness and shall be applied over a barrier sheet to separate from the LWC. All layers of insulation and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One layer of Soprafix Base 611, Soprafix Base 610, Soprafix Base 630, Soprafix, Soprafix Base 622, Soprafix [S], Soprafix Base 612, Soprafix [F], Soprafix Base 613, Soprafix [X] or Soprafix Base 614 fastened to the deck as described below:

Fastening #1:	Attach base sheet using Trufast #14 HD Fasteners with Trufast 2" Barbed Metal Seam Plates or SOPREMA #14 MP Fasteners with SOPREMA 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps. <i>(Meets Maximum Design Pressure of -67.5 psf. See General Limitation #7.)</i>
Fastening #2:	Attach base sheet using Trufast #14 HD Fasteners with Trufast 2.4" Scoop Seam Plates or SOPREMA #14 MP Fasteners with SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps. <i>(Meets Maximum Design Pressure of -75 psf. See General Limitation #7.)</i>
Fastening #3:	Attach base sheet using Trufast #15 EHD Fasteners, Trufast #14 HD Fastener or Trufast Fluted Concrete Nail with Trufast 2" Barbed Metal Seam Plates or SOPREMA #15 HD Fasteners, SOPREMA #14 MP Fastener or SOPREMA Fluted Concrete Nail with SOPREMA 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. in a 4" wide torch-applied base sheet side laps. <i>(Meets Maximum Design Pressure of -120 psf. See General Limitation #7.)</i>
Fastening #4:	Attach base sheet using Trufast #15 EHD Fasteners, Trufast #14 HD Fastener or Trufast Fluted Concrete Nail with Trufast 2.4" Scoop Seam Plates or SOPREMA #15 HD Fasteners, SOPREMA #14 MP Fastener or SOPREMA Fluted Concrete Nail with SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. in a 4" wide torch-applied base sheet side laps. <i>(Meets Maximum Design Pressure of -135 psf. See General Limitation #7.)</i>
Ply Sheet: (Optional)	One or more plies of Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP torch-applied.
Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1-1.5 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	See Fastening Requirements above.

Membrane: Liquid Applied Membrane

Deck Type 7I: Recover, Insulated

Deck Description: Structural concrete or 18-22 ga. (See fastening options for steel gage), Grade 80, Type B steel deck fastened to 1/4" thick steel structural supports spaced a maximum of 6' o.c. with Traxx/5 fasteners spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 12 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(9): Membrane fastened over insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer (LWC)	Insulation Fasteners (Table 3)	Fastener Density/ft²
Celcore MF Cellular Concrete, Siplast Lightweight Insulating Concrete, Elastizell Lightweight Insulating Concrete, Concrecel Lightweight Insulating Concrete or Mearlcrete Lightweight Insulating Concrete		
Minimum 2.0" thick, Minimum 300 psi.	N/A	N/A

Note: Load capacity of the structural substrate must be verified for the additional load of the LWC. The LWC must be properly vented.

Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Multi-Max FA-3, Ultra-Max, Sopra-ISO x, Sopra-ISO+ x, H-Shield, M-Shield, Sopra-ISO r, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus		
Minimum 1.5" thick	N/A	N/A

Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
Sopraboard		
Minimum 1/8" thick	N/A	N/A
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum 1/4" thick	N/A	N/A

Note: Top layer (other than LWC) shall have preliminary attachment, prior to the installation of the base sheet. Additional Insulation (other than LWC) shall be limited to maximum 1" total thickness and shall be applied over a barrier sheet to separate from the LWC. All layers of insulation and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One layer of Soprafix [X] or Soprafix Base 614 fastened to the deck as described below:

Fastening#1:	(Min. 22 ga. steel deck or concrete deck) Attach base sheet using Trufast #15 EHD Fasteners, Trufast #14 HD Fastener or Trufast Fluted Concrete Nail with Trufast 2.4" Scoop Seam Plates or SOPREMA #15 HD Fasteners, SOPREMA #14 MP Fastener or SOPREMA Fluted Concrete Nail with SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps. (Meets Maximum Design Pressure of -97.5 psf. See General Limitation #7.)
Fastening #2:	(Min. 20 ga. steel deck or concrete deck) Attach base sheet using Trufast #15 EHD Fasteners, Trufast #14 HD Fastener or Trufast Fluted Concrete Nail with Trufast 2.4" Scoop Seam Plates or SOPREMA #15 HD Fasteners, SOPREMA #14 MP Fastener or SOPREMA Fluted Concrete Nail with SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. and centered inside the 4" wide torch-applied base sheet side laps. (Meets Maximum Design Pressure of -135 psf. See General Limitation #7.)
Ply Sheet:	One or more plies of Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP torch-applied.
Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1-1.5 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	See Fastening Requirements above.

Membrane: Liquid Applied Membrane

Deck Type 7I: Recover, Insulated

Deck Description: Structural concrete or min. 22 ga., (See **Fastening Options for Steel Grade**), Type B steel deck fastened to ¼” thick steel structural supports spaced a maximum of 6’ o.c. with Traxx/5 fasteners and ¾” diameter steel washers spaced a maximum 6” o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 12 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(10): Membrane fastened over insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer (LWC)	Insulation Fasteners (Table 3)	Fastener Density/ft²
Celcore MF Cellular Concrete, Siplast Lightweight Insulating Concrete, Elastizell Lightweight Insulating Concrete, Concrecel Lightweight Insulating Concrete or Mearlcrete Lightweight Insulating Concrete		
Minimum 2.0” thick, Minimum 300 psi.	N/A	N/A

Note: Load capacity of the structural substrate must be verified for the additional load of the LWC. The LWC must be properly vented.

Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Multi-Max FA-3, Ultra-Max, Sopra-ISO x, Sopra-ISO+ x, H-Shield, M-Shield, Sopra-ISO r, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus		
Minimum 1.5” thick	N/A	N/A

Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
Sopraboard		
Minimum 1/8” thick	N/A	N/A
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum ¼” thick	N/A	N/A

Note: Top layer (other than LWC) shall have preliminary attachment, prior to the installation of the base sheet. Additional Insulation (other than LWC) shall be limited to maximum 1” total thickness and shall be applied over a barrier sheet to separate from the LWC. All layers of insulation and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One layer of Soprafix Base 610*, Soprafix Base 611*, Soprafix Base 612*, Soprafix Base 613*, Soprafix Base 614*, Soprafix Base 622, Soprafix Base 630*, Soprafix, Soprafix [S]*, Soprafix [F]*, Soprafix [X]* fastened to the deck as described below:
 *Requires torch-applied ply sheet.

Fastening #1:	(Grade 80 steel deck or concrete deck) Attach base sheet using Trufast #15 EHD Fasteners, Trufast #14 HD Fastener or Trufast Fluted Concrete Nail with Trufast 2” Barbed Metal Seam Plates or SOPREMA #15 HD Fasteners, SOPREMA #14 MP Fastener or SOPREMA Fluted Concrete Nail with SOPREMA 2” Seam Plates with row spacing at a maximum 35.5” o.c. The fasteners are spaced 6” o.c. in a 4” wide torch-applied base sheet side laps.
Fastening #2:	(Grade 33 steel deck or concrete deck) Attach base sheet using Trufast #15 EHD Fasteners, Trufast #14 HD Fastener or Trufast Fluted Concrete Nail with Trufast 2.4” Scoop Seam Plates or SOPREMA #15 HD Fasteners, SOPREMA #14 MP Fastener or SOPREMA Fluted Concrete Nail with SOPREMA 2.4” Seam Plates with row spacing at a maximum 35.5” o.c. The fasteners are spaced 6” o.c. in a 4” wide torch-applied base sheet side laps.
Ply Sheet: (Optional)	One or more plies of Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP torch-applied.
Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1-1.5 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	-112.5 psf. (See General Limitation #7.)

Membrane: Liquid Applied Membrane

Deck Type 7I: Recover, Insulated

- Deck Description:**
1. Structural concrete
 2. Minimum 22 ga., Grade 80, Type B steel deck attached to supports having a maximum span of 72" o.c.
 3. Minimum 22 ga., Grade 33, Type B steel deck attached to supports having a maximum span of 62" o.c.
 4. Minimum 20 ga., Grade 33, Type B steel deck attached to supports having a maximum span of 69" o.c.
 5. Minimum 18 ga., Grade 33, Type B steel deck attached to supports having a maximum span of 72" o.c.

All of the above steel deck options are attached to structural supports with one Traxx/5 fasteners and 3/4" diameter washers spaced 6" o.c. at each corrugation. Steel deck side laps are fastened 12" o.c. with Traxx/1 fasteners.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(11): Membrane fastened over insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer (LWC)	Insulation Fasteners (Table 3)	Fastener Density/ft²
Celcore MF Cellular Concrete, Siplast Lightweight Insulating Concrete, Elastizell Lightweight Insulating Concrete, Concrecel Lightweight Insulating Concrete or Mearlcrete Lightweight Insulating Concrete		
Minimum 2.0" thick, Minimum 300 psi.	N/A	N/A

Note: Load capacity of the structural substrate must be verified for the additional load of the LWC. The LWC must be properly vented.

Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Multi-Max FA-3, Ultra-Max, Sopra-ISO x, Sopra-ISO+ x, H-Shield, M-Shield, Sopra-ISO r, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus		
Minimum 1.5" thick	N/A	N/A

Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
Sopraboard		
Minimum 1/8" thick	N/A	N/A
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum 1/4" thick	N/A	N/A

Note: Top layer (other than LWC) shall have preliminary attachment, prior to the installation of the base sheet. Additional Insulation (other than LWC) shall be limited to maximum 1" total thickness and shall be applied over a barrier sheet to separate from the LWC. All layers of insulation and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet:	One layer of Soprafix Base 621, Soprafix Base 622, Soprafix, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 Sanded or Sopralene 250 SP fastened to the deck as described below:
Fastening:	Attach base sheet using Trufast #15 EHD Fasteners, Trufast #14 HD Fastener or Trufast Fluted Concrete Nail with Trufast 2" Barbed Metal Seam Plates or Trufast 2.4" Scoop Seam Plates or SOPREMA #15 HD Fasteners, SOPREMA #14 MP Fastener or SOPREMA Fluted Concrete Nail with SOPREMA 2" Seam Plates or SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. and centered inside the 4" wide torch-applied base sheet side laps.
Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1-1.5 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	-112.5 psf. (See General Limitation #7.)

Membrane: Liquid Applied Membrane

Deck Type 7I: Recover, Insulated

Deck Description:

1. Structural concrete
2. Minimum 22 ga., Grade 33, Type B steel deck attached to supports having a maximum span of 5' o.c.

All of the above steel deck options are attached to structural supports with one Traxx/5 fasteners spaced 6" o.c. Side laps are fastened 24" o.c. with Traxx/1 fasteners.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(12): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Vapor Barrier: Soprapap'r, self-adhered.
(Optional)

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
H-Shield, M-Shield, Sopra-ISO r Minimum 1.5" thick	N/A	N/A

Note: Insulation layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One layer of Soprafix Base 611*, Soprafix Base 610*, Soprafix Base 612*, Soprafix Base 614*, Soprafix Base 621, Soprafix Base 622, Soprafix, Soprafix [S]*, Soprafix [X]* fastened to the deck as described below:
*Requires torch-applied ply sheet.

Fastening: Attach base sheet using Trufast #15 EHD Fasteners, Trufast #14 HD Fastener or Trufast Fluted Concrete Nail with Trufast 2" Barbed Metal Seam Plates, Trufast 2.4" Scoop Seam Plates or SOPREMA #15 HD Fasteners, SOPREMA #14 MP Fastener or SOPREMA Fluted Concrete Nail with SOPREMA 2" Seam Plates, SOPREMA 2.4" Seam Plates spaced 6" o.c. within min. 4" wide, heat-welded side laps.

Ply Sheet: One or more plies of Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP torch-applied.
(Optional)

Primer: Alsan RS 222 Primer applied at a rate of 1-1.5 gal./sq.
(Optional)

Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing:	Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
Maximum Design Pressure:	-79 psf.; with Steel Deck Option #2 (See General Limitation #7) -120 psf.; with Concrete Deck Option #1 (See General Limitation #7)

Membrane: Liquid Applied Membrane

Deck Type 7I: Recover, Insulated

Deck Description: Structural concrete or min. 22 ga., Type B, Grade 80 steel deck fastened to ¼” thick steel structural supports spaced a maximum of 6’ o.c. with Traxx/5 fasteners spaced a maximum 6” o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 12 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(13): Membrane fastened over insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer (LWC)	Insulation Fasteners (Table 3)	Fastener Density/ft²
Celcore MF Cellular Concrete, Siplast Lightweight Insulating Concrete, Elastizell Lightweight Insulating Concrete, Concrecel Lightweight Insulating Concrete or Mearlcrete Lightweight Insulating Concrete		
Minimum 2.0” thick, Minimum 300 psi.	N/A	N/A

Note: Load capacity of the structural substrate must be verified for the additional load of the LWC. The LWC must be properly vented.

Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Multi-Max FA-3, Ultra-Max, Sopra-ISO x, Sopra-ISO+ x, H-Shield, M-Shield, Sopra-ISO r, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus		
Minimum 1.5” thick	N/A	N/A

Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
Sopraboard		
Minimum 0.125” thick	N/A	N/A
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum 0.25” thick	N/A	N/A

Note: Top layer (other than LWC) shall have preliminary attachment, prior to the installation of the base sheet. Additional Insulation (other than LWC) shall be limited to maximum 1” total thickness and shall be applied over a barrier sheet to separate from the LWC. All layers of insulation and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One layer of Soprafix Base 610*, Soprafix Base 611*, Soprafix Base 612*, Soprafix Base 613*, Soprafix Base 614*, Soprafix Base 622, Soprafix Base 630*, Soprafix, Soprafix [S]*, Soprafix [F]*, Soprafix [X]* fastened to the deck as described below:
 *Requires torch-applied ply sheet.

Fastening #1:	Attach base sheet using Trufast #14 HD Fasteners with Trufast 2” Barbed Metal Seam Plates or SOPREMA #14 MP Fasteners with SOPREMA 2” Seam Plates with row spacing at a maximum 35.5” o.c. The fasteners are spaced 6” o.c. and centered inside the 4” wide torch-applied base sheet side laps. <i>(Meets Maximum Design Pressure of -120 psf. See General Limitation #7.)</i>
Fastening #2:	Attach base sheet using Trufast #14 HD Fasteners with Trufast 2.4” Scoop Seam Plates or SOPREMA #14 MP Fasteners with SOPREMA 2.4” Seam Plates with row spacing at a maximum 35.5” o.c. The fasteners are spaced 6” o.c. and centered inside the 4” wide torch-applied base sheet side laps. <i>(Meets Maximum Design Pressure of -135 psf. See General Limitation #7.)</i>
Ply Sheet: (Optional)	One or more plies of Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP torch-applied.
Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1-1.5 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	See Fastening Requirements above.

Membrane Type:	Liquid Applied Membrane
Deck Type 7:	Recover, Non-Insulated
Deck Description:	<p>Lightweight Concrete, min. 360 psi. over structural concrete or 18-22 ga., Type B, Grade 33 steel deck with supports spaced maximum 5' o.c. * The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 88 lbf when tested with 1.8" Trufast Twin Loc-Nail Assembled Fasteners or SOPREMA Twin Loc-Nails, installed through to the deck in accordance with TAS 105.</p> <p>This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.</p>
System Type E(1):	Base sheet mechanically fastened to substrate.
All General and System Limitations apply.	
Base Sheet:	One ply of Sopra-G, Sopra 4897, Soprabase, Soprabase S or Soprabase TG fastened to the deck as described below:
Fastening:	Attach base sheet using 1.8" Trufast Twin Loc-Nail Assembled Fasteners or SOPREMA Twin Loc-Nails spaced 9" o.c. in a 4" lap and 9" o.c. in two staggered rows in the center of the sheet.
Ply Sheet:	<p>One or more plies of Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied.</p> <p>Or</p> <p>One or more plies of Elastophene Sanded, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene HS 62, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Sopralene 180 Sanded, Sopralene 250 Sanded or Sopra IV or Sopra VI ply sheet, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in or in COLPLY EF Adhesive at a rate of 1.5 gal./sq.</p>
Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1-1.5 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	-60 psf. (See General Limitation #7)

Membrane Type:	Liquid Applied Membrane
Deck Type 7:	Recover, Non-Insulated
Deck Description:	Cementitious Wood Fiber over steel structural supports spaced 36" o.c. and secured with three, equally spaced, Dekfast #14 fasteners with 2" plates spaced 16" o.c. * The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 40 lbf when tested with 1.8" long Trufast Twin Loc-Nail Assembled Fasteners or SOPREMA Twin Loc-Nails, installed through to the deck in accordance with TAS 105.
System Type E(2):	Base sheet mechanically fastened to substrate.
All General and System Limitations apply.	
Primer: (Optional)	Elastocol 500, Elastocol Stick, Elastocol Stick Zero applied at a rate of 1 gal./sq., to top surface of any base or ply sheet prior to application of next layer
Base Layer:	Sopra-G, Soprabase, Soprabase S or Soprabase TG* mechanically attached with 1.8" long Trufast Twin Loc-Nail Assembled Fasteners or SOPREMA Twin Loc-Nails spaced 6" o.c. in a min. 4" lap and 6" o.c. in two evenly spaced staggered rows in the field. *Requires torch-applied ply sheet.
Ply Sheet: (Optional)	Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied. Or Elastophene Sanded, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene HS 62, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Sopralene 180 Sanded, Sopralene 250 Sanded, adhered in hot asphalt at 25 lbs./sq. or in COLPLY EF Adhesive at a rate of 1.5 gal./sq.
Primer: (Optional)	Alsar RS 222 Primer applied at a rate of 1-1.5 gal./sq.
Base Coat:	Alsar RS 230 Field, Alsar RS 260 LO Field, Alsar RS 230 Flash or Alsar RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsar RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsar RS 230 Field, Alsar RS 260 LO Field, Alsar RS 230 Flash or Alsar RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	-60 psf. (See General Limitation #7.)

Membrane Type:	Liquid Applied Membrane
Deck Type 7:	Recover, Non-Insulated
Deck Description:	Cellular Lightweight Concrete, min. 427 psi. over structural concrete or 22 ga., Type B, Grade 33, vented steel deck secured at 5' o.c. spans with Tek/5 fasteners spaced 6" o.c. Side laps are secured with Tek/1 fasteners at 20" o.c. * The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 170 lbf when tested with 1.8" Trufast Twin Loc-Nail Assembled Fasteners or SOPREMA Twin Loc-Nails, installed through to the deck in accordance with TAS 105. This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.
System Type E(3):	Base sheet mechanically fastened to substrate.
All General and System Limitations apply.	
Base Sheet:	One ply of Sopra-G, Sopra 4897, Soprabase, Soprabase S or Soprabase TG fastened to the deck as described below:
Fastening:	Attach base sheet using 1.8" Trufast Twin Loc-Nail Assembled Fasteners or SOPREMA Twin Loc-Nails spaced 9" o.c. in a 4" lap and 9" o.c. in two staggered rows in the center of the sheet.
Ply Sheet:	One or more plies of Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied.
Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1-1.5 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	-67.5 psf. (See General Limitation #9.)

Membrane Type: Liquid Applied Membrane

Deck Type 7: Recover, Non-Insulated

Deck Description: Cementitious Wood Fiber over steel structural supports spaced 36" o.c. and secured with three, equally spaced, Dekfast #14 fasteners with 2" plates spaced 16" o.c. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 61 lbf when tested with 1.8" Trufast Twin Loc-Nail Assembled Fasteners or SOPREMA Twin Loc-Nails, installed through to the deck in accordance with TAS 105.

System Type E(4): Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Primer: Elastocol 500, Elastocol Stick, Elastocol Stick Zero applied at a rate of 1 gal./sq.,
(Optional) to top surface of any base or ply sheet prior to application of next layer

Base Layer: One layer Soprafix, Soprafix Base 622, Soprafix [S]*, Soprafix Base 612*, Soprafix [F]*, Soprafix Base 613*, Soprafix [X]*, Soprafix Base 614*, Soprafix-e or Soprafix Base 641, mechanically attached with 1.8" Trufast Twin Loc-Nail Assembled Fasteners or SOPREMA Twin Loc-Nails spaced 6" o.c. through OMG Polymer Batten Strip, Trufast Twin Loc-Nail Batten Fastener or Dekfast Coiled Batten Strip or Soprafix MBB-R, placed in the lap and in one row centered in the field.
Center fastener row is covered with an 8" wide strip of Sopralene Flam Stick or Sopralene Stick or Colphene Stick, self-adhered.
*Requires torch-applied ply sheet.

Ply Sheet: One or more layers of Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied.

Primer: Alsan RS 222 Primer applied at a rate of 1-1.5 gal./sq.
(Optional)

Base Coat: Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.

Reinforcement: Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.

Top Coat: Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.

Surfacing: Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
(Optional)

Maximum Design Pressure: -82.5 psf. (See General Limitation #7.)

Membrane Type: Liquid Applied Membrane
Deck Type 3I: Recover, Non-Insulated
Deck Description: Structural Concrete
System Type F: Alsan RS Roof System applied directly to existing Granule Surface Modified Bitumen roof cover.

All General and System Limitations apply.

Base Coat: Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 61.2 lbs./sq.

Reinforcement: Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.

Top Coat: Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 40.8 lbs./sq.

**Surfacing:
(Optional)** Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.

**Maximum Design
Pressure:** -217.5 psf. (See General Limitation #9.)

RECOVER SYSTEM LIMITATIONS:

1. All System Limitations and General Limitations shall apply. See specific deck type Notice of Acceptance for deck type System Limitations.
2. All assemblies listed herein shall be installed in compliance with the applicable sections of FBC 1521. Uplift performance of assemblies bonded to existing roofing system shall be verified per 1521.10. Uplift performance of assemblies mechanically attached through existing roofing system shall be verified per 1521.11.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance; refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each side lap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq. **Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.**
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. Insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform to Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 61G20-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE



NOA No.: 15-0707.07
Expiration Date: 09/01/21
Approval Date: 09/01/16
Page 55 of 55